

ABSTRACT

Object: A high speed machining component, which has been improved in wear resistance and lubricating properties, and
5 a high speed dry machining method using the component are provided. Particularly, a high speed cutting tool and a high speed cutting method are provided.

Means for solution: A halogen element is ion-implanted into a machining component having a cemented carbide as a base material, and the machining component is contacted with a workpiece at a speed of 150 m/min or higher, whereby the wear resistance and lubricating properties of the component can be improved. If the machining component has a Ti-containing coating layer, its wear resistance and
15 lubricating properties can be improved similarly. The use of a cutting tool including such a component enables high speed dry cutting without a cutting oil. By bringing the machining component of the present invention into contact with the workpiece at a high speed, a self-lubricating film
20 can be formed on a surface of contact of the component with the work material.